

**UNITED STATES DISTRICT COURT  
NORTHER DISTRICT OF OHIO  
EASTERN DIVISION**

Terves LLC,	)	
	)	Case No. <u>1:19-cv-1611</u>
Plaintiff,	)	
	)	JUDGE DONALD C. NUGENT
vs.	)	
	)	
Yueyang Aerospace New Materials Co.,	)	
Ltd.,	)	
	)	
and	)	
	)	
Ecometal Inc.,	)	
	)	
and	)	
	)	
Nick Yuan,	)	
	)	
Defendants.	)	

**DEFENDANTS ECOMETAL, INC. AND NICK YUAN’S  
ANSWER AND AFFIRMATIVE DEFENSES TO FIRST AMENDED COMPLAINT**

Defendants Ecometal, Inc. and Nick Yuan (collectively “the Ecometal Defendants”), for their Answer and Affirmative Defenses to Plaintiff Terves LLC’s (“Terves”) First Amended Complaint, state as follows:

**Summary of Case**

1. Terves is a Euclid, Ohio, company that has researched, developed, and patented unique and valuable magnesium-based, dissolvable materials for constructing drilling tools for the oil and gas industry. Making tools out of dissolvable materials allows drillers to leave their tools in underground wells to dissolve and avoids the substantial cost and time of having to retrieve the tools from miles below ground.

**ANSWER:** The Ecometal Defendants are without sufficient information or knowledge to form a belief as to the truth or falsity of the allegations in Paragraph 1 of Terves’ First Amended Complaint and therefore deny the same.

2. Terves owns multiple patents to its dissolvable cast magnesium inventions, including the two patents that it asserts here: U.S. Patent No. 9,903,010 (the "'010 patent") and U.S. Patent No. 10,329,653 (the "'653 patent"), collectively the "Terves Patents," which are attached as Exhibits A and B, respectively.

**ANSWER:** The Ecometal Defendants admit that Terves has been recorded as the owner of the '010 and '653 Patents, which are attached to the First Amended Complaint as Exhibits A and B, respectively, with the United States Patent and Trademark Office. The Ecometal Defendants are without sufficient information or knowledge to form a belief as to the truth or falsity of the remaining allegations in Paragraph 2 of Terves' First Amended Complaint and therefore deny the same.

3. Defendants are working together to manufacture in China, and then import and sell in the U.S., dissolvable cast magnesium materials that infringe the Terves' patents.

**ANSWER:** The Ecometal Defendants deny the allegations in Paragraph 3 of the First Amended Complaint.

4. Defendants are able to grossly undercut Terves' prices for dissolvable cast magnesium because Defendants: (a) have reverse-engineered and copied Terves' formulation, so they have no R&D costs to recoup; and (b) are benefiting from the low labor costs, low materials costs, and government subsidies in China.

**ANSWER:** The Ecometal Defendants deny the allegations in Paragraph 4 of the First Amended Complaint.

5. By importing lower-price, foreign-made, copycat materials, Defendants are severely damaging the Terves' business by causing it to lose customers, sales, and market share and to suffer price erosion.

**ANSWER:** The Ecometal Defendants deny the allegations in Paragraph 5 of the First Amended Complaint.

6. Because the cast magnesium materials imported into the U.S. by the Defendants, and their method of manufacture, are patented by Terves, Defendants' activities constitute patent infringement.

**ANSWER:** The Ecometal Defendants deny the allegations in Paragraph 6 of the First Amended Complaint.

7. Terves sues to save its business, to stop Defendants' infringement, and to obtain monetary relief.

**ANSWER:** The Ecometal Defendants are without sufficient information or knowledge to form a belief as to the truth or falsity of the allegations in Paragraph 7 of Terves' First Amended Complaint and therefore deny the same.

### **The Parties**

8. Terves is a Nevada limited liability company with a principal place of business in Euclid, Ohio.

**ANSWER:** The Ecometal Defendants admit that Terves is listed as an active limited liability company with the Nevada Secretary of State. The Ecometal Defendants are without sufficient information or knowledge to form a belief as to the truth or falsity of the remaining allegations in Paragraph 8 of Terves' First Amended Complaint and therefore deny the same.

9. Yueyang Aerospace New Materials Co. Ltd. ("Yueyang") is a Chinese company that does business in the U.S. and imports and sells products, including the infringing magnesium materials, in the U.S. According to Yueyang's website (en.yhalloy.com), its factory address is Jingming RD, Junshan Industrial Zone, Yueyang City, 414005, Hunan, China.

**ANSWER:** The Ecometal Defendants are without sufficient information or knowledge to form a belief as to the truth or falsity of the allegations in Paragraph 9 of Terves' First Amended Complaint and therefore deny the same.

10. Ecometal Inc. ("Ecometal") is a Canadian business corporation that does business in the U.S. and imports and sells products, including the infringing magnesium materials, in the U.S. According to Ecometal's website (ecometalinc.ca), its address is 35 Owl Ridge Drive, Richmond Hill, Ontario L4S 1P8, Canada. This address also is the private residence of Nick Yuan. Mr. Yuan operates his Ecometal business from his residence.

**ANSWER:** The Ecometal Defendants admit that Ecometal is a Canadian corporation maintaining its principal place of business at 35 Owl Ridge Drive, Richmond Hill, Ontario L4S 1P8.

Ecometal further admits that this is also Mr. Yuan's private residence. The Ecometal Defendants deny the remaining allegations in Paragraph 10 of the First Amended Complaint.

11. Nick Yuan is an individual who resides at 35 Owl Ridge Drive, Richmond Hill, Ontario L4S 1P8, Canada. He owns and operates Ecometal Inc., and he is a principal, and upon information and belief a shareholder, of Yueyang. Mr. Yuan regularly holds himself out in the marketplace and to customers as the "Ecometal" company, and he holds himself out as a representative and principal of Yueyang.

**ANSWER:** The Ecometal Defendants admit that Mr. Yuan resides at 35 Owl Ridge Drive, Richmond Hill, Ontario L4S 1P8. The Ecometal Defendants further admit that Mr. Yuan wholly owns and operates Ecometal. The Ecometal Defendants deny the remaining allegations in Paragraph 11 of the First Amended Complaint.

### **Jurisdiction and Venue**

12. This Court has subject matter jurisdiction over Terves' claims under 28 U.S.C. §§ 1331 and 1338(a) because they arise under federal law and, more specifically, under the US. Patent Act, 35 U.S.C. § 1 *et seq.*

**ANSWER:** The Ecometal Defendants admit the allegations in Paragraph 12 of the First Amended Complaint.

13. This Court has personal jurisdiction over Defendants at least because, among other things, they do business in Ohio; have willfully infringed Terves' Patents and intentionally caused tortious harm to Terves in Ohio; have solicited business in Ohio and have offered to sell goods and services in Ohio and to Ohio residents and businesses; and upon information and belief, have actually sold goods and services in Ohio and to Ohio residents and businesses, including infringing products.

**ANSWER:** The Ecometal Defendants deny the allegations in Paragraph 13 of the First Amended Complaint.

14. Venue is proper under 28 U.S.C. § 1931 at least because Defendants are subject to personal jurisdiction in this district under Ohio law and, therefore, reside in this district according to federal law.

**ANSWER:** The Ecometal Defendants deny the allegations in Paragraph 14 of the First Amended Complaint.

## **Relevant Facts**

### **I. Terves' Rights**

15. Terves is a technology leader in the development, engineering, manufacture, and sale of engineered products for the oil and gas industry.

**ANSWER:** The Ecometal Defendants are without sufficient information or knowledge to form a belief as to the truth or falsity of the allegations in Paragraph 15 of Terves' First Amended Complaint and therefore deny the same.

16. At their research facility in Euclid, Ohio, Terves' metallurgists and material scientists have made breakthrough inventions in the oil and gas industry.

**ANSWER:** The Ecometal Defendants are without sufficient information or knowledge to form a belief as to the truth or falsity of the allegations in Paragraph 16 of Terves' First Amended Complaint and therefore deny the same.

17. Most relevant here, Terves is the leader in developing dissolvable materials for making drilling tools, such as frac balls, frac plugs, and other components used in oil and gas well completion and production.

**ANSWER:** The Ecometal Defendants specifically deny that Terves is the leader in developing drilling tools, such as frac balls and frac plugs. The Ecometal Defendants are without sufficient information or knowledge to form a belief as to the truth or falsity of the remaining allegations in Paragraph 17 of Terves' First Amended Complaint and therefore deny the same.

18. Some of Terves' most important inventions are new ways to melt, mix, and cast magnesium to construct dissolvable drilling tools that provide improved control over dissolution rates and increased strength and reliability.

**ANSWER:** The Ecometal Defendants specifically deny that Terves has invented new ways to melt, mix, and cast magnesium to construct dissolvable drilling tools. The Ecometal Defendants are without sufficient information or knowledge to form a belief as to the truth or falsity of the remaining allegations in Paragraph 18 of Terves' First Amended Complaint and

therefore deny the same.

19. Dissolvable drilling tools can be left miles below ground after drilling is done and then dissolved by, for example, injecting a potassium chloride solution into the well. This results in a large time and money savings because the driller need not run a retrieval line miles below the ground to fish out the drilling tools. Thus, there is high demand by the industry for effective dissolvable tooling.

**ANSWER:** The Ecometal Defendants are without sufficient information or knowledge to form a belief as to the truth or falsity of the allegations in Paragraph 19 of Terves' First Amended Complaint and therefore deny the same.

20. Recognizing Terves' unique and useful inventions, the United States Patent and Trademark Office has issued numerous patents to Terves, including the '010 and '653 patents.

**ANSWER:** The Ecometal Defendants admit that the United States Patent and Trademark Office issued the '010 and '653 Patents. The Ecometal Defendants deny the remaining allegations in Paragraph 20 of the First Amended Complaint.

21. The '010 patent issued on February 27, 2018, is owned exclusively by Terves, and is directed to methods for casting magnesium and controlling its dissolution properties.

**ANSWER:** The Ecometal Defendants admit the version of the '010 Patent attached to the First Amended Complaint as Exhibit A bears an issue date of February 27, 2018. The Ecometal Defendants further admit that Terves has been recorded as the owner the '010 Patent with the United States Patent and Trademark Office. Defendants are without sufficient information or knowledge to form a belief as to the truth or falsity of the remaining allegations in Paragraph 21 of Terves' First Amended Complaint and therefore deny the same.

22. The '653 patent issued on June 25, 2019, is owned exclusively by Terves, and is directed to dissolvable magnesium composites.

**ANSWER:** The Ecometal Defendants admit the version of the '653 Patent attached to the First Amended Complaint as Exhibit B bears an issue date of June 25, 2019. The Ecometal Defendants further admit that Terves has been recorded as the owner the '653 Patent with the

United States Patent and Trademark Office. Defendants are without sufficient information or knowledge to form a belief as to the truth or falsity of the remaining allegations in Paragraph 22 of Terves' First Amended Complaint and therefore deny the same.

23. Terves' patented magnesium materials are a breakthrough in the drilling industry. Terves' cast materials achieve better strength and ductility qualities than powder-based dissolvable materials. They offer better control over dissolution rates that allow for quicker dissolution to bring the well to a production state more quickly.

**ANSWER:** The Ecometal Defendants deny the allegations in Paragraph 23 of the First Amended Complaint.

24. Terves makes and sells materials that are: (a) covered by the '653 patent, and (b) made by methods claimed by the '010 patent.

**ANSWER:** The Ecometal Defendants are without sufficient information or knowledge to form a belief as to the truth or falsity of the allegations in Paragraph 24 of Terves' First Amended Complaint and therefore deny the same.

## **II. Defendants' Wrongful Acts**

### **A. Defendants' Conspiracy to Infringe**

25. Defendants have agreed and conspired to work together, and are working together, to import, sell, offer to sell, and/or use in the U.S. dissolvable cast magnesium materials that are manufactured by the processes recited in one or more claims of the '010 patent and that have compositions covered by one or more claims of the '653 patent. Collectively, these dissolvable cast magnesium materials imported by the Defendants are the "Infringing Materials."

**ANSWER:** The Ecometal Defendants deny the allegations in Paragraph 25 of the First Amended Complaint.

26. The shared goal of the Defendants is simple: make money by infringing and copying Terves' materials, sell them at lower prices, and take business from Terves and others in the market.

**ANSWER:** The Ecometal Defendants deny the allegations in Paragraph 26 of the First Amended Complaint.

27. The agreement between Yueyang, Ecometal, and Nick Yuan is that Yueyang will manufacture the infringing material and ship it to the U.S., while Mr. Yuan individually and through his Ecometal business arranges business deals for the materials to be brought into the U.S., machined into drilling tools or other components, and then sold and resold in chains of distribution to end user drilling companies.

**ANSWER:** The Ecometal Defendants deny the allegations in Paragraph 27 of the First Amended Complaint.

28. Yueyang is a Chinese business that owns a production facility in Yueyang, China.

**ANSWER:** The Ecometal Defendants are without sufficient information or knowledge to form a belief as to the truth or falsity of the allegations in Paragraph 28 of Terves' First Amended Complaint and therefore deny the same.

29. Yueyang's China facility includes a furnace and Vertical Direct Chill (VDC) casting machinery.

**ANSWER:** The Ecometal Defendants are without sufficient information or knowledge to form a belief as to the truth or falsity of the allegations in Paragraph 29 of Terves' First Amended Complaint and therefore deny the same.

30. At its China facility, Yueyang manufactures the Infringing Materials by heating and melting magnesium and magnesium alloys, mixing additives to the melted magnesium and magnesium alloys, and cooling the melted (or partially melted) material in its VDC caster.

**ANSWER:** The Ecometal Defendants are without sufficient information or knowledge to form a belief as to the truth or falsity of the allegations in Paragraph 30 of Terves' First Amended Complaint and therefore deny the same.

31. Together with Nick Yuan and Ecometal, Yueyang then imports the Infringing Materials into the U.S. where they are machined into drilling tools, such as frac plug and frac balls, and sold through chains of distribution to companies that use the Infringing Materials to drill oil and gas wells.

**ANSWER:** The Ecometal Defendants deny the allegations in Paragraph 31 of the First Amended Complaint.



32. Yueyang imports, sells, and offers to sell the Infringing Materials in the U.S., either directly or through partners, such as Ecometal and Yuan.

**ANSWER:** The Ecometal Defendants deny the allegations in Paragraph 32 of the First Amended Complaint.

33. Ecometal is a sole proprietorship, where Mr. Yuan is the sole employee, executive, and manager of Ecometal. He operates and controls every aspect of the business, and he executes all of Ecometal's business activities.

**ANSWER:** The Ecometal Defendants admit that Mr. Yuan is the sole employee of Ecometal and that he executes all of Ecometal's business activities. The Ecometal Defendants deny the remaining allegations in Paragraph 33 of the First Amended Complaint.

34. Mr. Yuan alone controls the Ecometal business and performs and directs all of the company's actions, including making all management decisions, deciding what materials to purchase, what business deals to enter into, and what materials to import into the U.S., what prices to charge, and who to buy from and sell to.

**ANSWER:** The Ecometal Defendants admit the allegations in Paragraph 34 of the First Amended Complaint.

35. By virtue of his ownership of Yueyang and his principal role within the organization, Mr. Yuan has control and influence over Yueyang, and he has used that control and influence to direct Yueyang to manufacture the Infringing Products and then to import, sell, and offer to sell those products in the U.S.

**ANSWER:** The Ecometal Defendants deny the allegations in Paragraph 35 of the First Amended Complaint.

36. Mr. Yuan has been actively soliciting businesses in the U.S., on behalf of himself, Ecometal, and Yueyang, to have businesses purchase, sell, machine, and/or distribute the Infringing Materials in the U.S.

**ANSWER:** The Ecometal Defendants deny the allegations in Paragraph 36 of the First Amended Complaint.

37. Among the various U.S. companies and individuals that Defendants work with to distribute and sell Infringing Materials is a Colorado-based company called "Protek Systems LLC."

**ANSWER:** The Ecometal Defendants deny the allegations in Paragraph 37 of the First Amended Complaint.

38. Protek buys or arranges purchases of Infringing Material from the Defendants and distributes or resells them to others in the U.S., and Protect (*sic*) otherwise assists and partners with Mr. Yuan and Ecometal to arrange the sale and resale of the Infringing Materials in the U.S.

**ANSWER:** The Ecometal Defendants deny the allegations in Paragraph 38 of the First Amended Complaint.

39. Magnesium Machine, LLC, which does business as "MMP," is an Oklahoma company in Chickasha, Oklahoma, that also assists and partners with Defendants to import, distribute, and resell the Infringing Materials in the U.S.

**ANSWER:** The Ecometal Defendants are without sufficient information or knowledge to form a belief as to the truth or falsity of the allegations in Paragraph 39 of Terves' First Amended Complaint and therefore deny the same.

40. Among other things, MMP further processes and machines the Infringing Materials to make them more market-ready for downstream buyers and resellers.

**ANSWER:** The Ecometal Defendants are without sufficient information or knowledge to form a belief as to the truth or falsity of the allegations in Paragraph 40 of Terves' First Amended Complaint and therefore deny the same.

41. Defendants, MMP, and Protek partner to import the Infringing Materials into the U.S., and to make profit at each stage in the distribution chain from Yueyang to end users.

**ANSWER:** The Ecometal Defendants deny the allegations in Paragraph 41 of the First Amended Complaint.

42. Among other things, Ecometal and Mr. Yuan are ordering or purchasing Infringing Material from Yueyang and directing that it be shipped into the U.S. or facilitating the ordering or purchasing of that material from Yueyang.

**ANSWER:** The Ecometal Defendants deny the allegations in Paragraph 42 of the First Amended Complaint.

43. Import Bills of Lading confirm that Ecometal is involved in the importing of Infringing Material. For example, the Import Bill of Lading attached as Exhibit C shows that 18 cartons of Magnesium alloy extruded round bars were imported from China into the U.S. on February 3, 2019. Upon information and belief, those round bars are Infringing Materials that were manufactured by Yueyang and extruded in China by a third-party or affiliate of Yueyang before shipment.

**ANSWER:** The Ecometal Defendants admit that Exhibit C to the First Amended Complaint appears to be a Bill of Lading Detail obtained from a publicly-available shipping website. The Ecometal Defendants are without sufficient information or knowledge to form a belief as to the truth or falsity of the remaining allegations in Paragraph 43 of Terves' First Amended Complaint and therefore deny the same.

44. The Bill of Lading identifies "MMP Ecometal" as the Consignee and provides an address in Chickasha, Oklahoma. This document further shows that Ecometal and MMP are working together to import Infringing Material into the U.S.

**ANSWER:** The Ecometal Defendants admit that the Bill of Lading Detail attached to the First Amended Complaint as Exhibit C identifies an "MMP Ecometal" and provides an address in Chickasha, Oklahoma. The Ecometal Defendants deny the remaining allegations in Paragraph 44 of the First Amended Complaint.

45. In 2015, in an effort to duplicate Terves' materials at a lower price, Protek obtained samples of Terves' dissolvable cast magnesium material and asked a metallurgical engineer to reverse engineer the Terves material. The engineer refused to do so.

**ANSWER:** The Ecometal Defendants are without sufficient information or knowledge to form a belief as to the truth or falsity of the allegations in Paragraph 45 of Terves' First Amended Complaint and therefore deny the same.

46. Upon information and belief, Protek persisted in trying to reverse engineer Terves' materials and ultimately found individuals or businesses willing to analyze Terves' material, instructed them to reverse engineer it, and then Protek used the results of the reverse engineering work to provide specifications or other instructions to Yueyang for it to manufacture dissolvable cast magnesium material identical to Terves' patented materials.

**ANSWER:** The Ecometal Defendants are without sufficient information or knowledge

to form a belief as to the truth or falsity of the allegations in Paragraph 46 of Terves' First Amended Complaint and therefore deny the same.

47. Upon information and belief, Yueyang used and continues to use information reverse engineered from Terves' materials to manufacture the dissolvable cast magnesium that it imports and sells in the U.S.

**ANSWER:** The Ecometal Defendants are without sufficient information or knowledge to form a belief as to the truth or falsity of the allegations in Paragraph 47 of Terves' First Amended Complaint and therefore deny the same.

**B. Terves' Investigation**

48. Terves has attempted to obtain or purchase dissolvable cast magnesium from Ecometal for testing to dispositively prove that the material infringes, but Ecometal has refused to sell or otherwise provide the material to Terves.

**ANSWER:** The Ecometal Defendants deny the allegations in Paragraph 48 of the First Amended Complaint.

49. The Infringing Material itself is not available for purchase in the U.S. to the public. Rather, Defendants distribute and sell the Infringing Material in the U.S. only through specific channels of distribution that are selected and controlled by Defendants and by others downstream from the Defendants.

**ANSWER:** The Ecometal Defendants deny the allegations in Paragraph 49 of the First Amended Complaint.

50. The specifications, instructions, or formulations used by Defendants to manufacture the Infringing Material are not publicly available and are kept secret by the Defendants.

**ANSWER:** The Ecometal Defendants deny the allegations in Paragraph 50 of the First Amended Complaint.

51. In this action, on October 4, 2019, Terves served Interrogatories and Rule 34 Document Requests upon Ecometal and Mr. Yuan to obtain the formulation evidence, business records, and product samples for testing that should dispositively prove that the compositions of the Infringing Materials are infringing the '653 patent and the methods of manufacture infringe the '010 patent.

**ANSWER:** The Ecometal Defendants admit that Terves served Interrogatories and Rule 34 Document requests upon Ecometal and Mr. Yuan on October 4, 2019. The Ecometal Defendants deny the remaining allegations in Paragraph 51 of the First Amended Complaint.

52. Terves has also issued document subpoenas in this action to third-parties in the downstream chain of distribution that likely have possession of evidence of the Infringing Materials' compositions and methods of manufacture. So far, the third-parties have resisted the subpoenas and refused to turn over formula information or any cast magnesium samples for testing. Thus, this information can only be obtained by compelling it through this Court's discovery power.

**ANSWER:** The Ecometal Defendants are without sufficient information or knowledge to form a belief as to the truth or falsity of the allegations in Paragraph 52 of Terves' First Amended Complaint and therefore deny the same.

53. Importation records maintained by U.S. Customs show that Yueyang and Ecometal have imported over 190 tons of dissolvable cast magnesium that that was shipped to Magnesium Machine LLC (dba "MMP") in Oklahoma. MMP machines and processes those materials to create dissolvable drilling tools that are sold and/or distributed downstream to drilling companies.

**ANSWER:** The Ecometal Defendants are without sufficient information or knowledge to form a belief as to the truth or falsity of the allegations in Paragraph 53 of Terves' First Amended Complaint and therefore deny the same.

54. Terves' market intelligence reports that Yueyang has shipped an additional 100 tons of dissolvable magnesium by ship into the U.S. as recently as September 2019.

**ANSWER:** The Ecometal Defendants are without sufficient information or knowledge to form a belief as to the truth or falsity of the allegations in Paragraph 54 of Terves' First Amended Complaint and therefore deny the same.

55. Terves has obtained samples of dissolvable cast magnesium that originated from China from U.S. resellers. Terves' testing of those samples confirmed that their compositions were covered by one or more claims of the '653 patent and they were manufactured by the methods recited by one or more claims of the 'OLD patent. Based on Terves' industry and market knowledge, Yueyang is the most likely source of the material that Terves obtained and that tested positive for infringement of both Terves' patents.

**ANSWER:** The Ecometal Defendants are without sufficient information or knowledge to form a belief as to the truth or falsity of the allegations in Paragraph 55 of Terves' First Amended Complaint and therefore deny the same.

56. Any further efforts to obtain access to Yueyang's China facility, to records showing how the Infringing Materials are manufactured, or to the Infringing Materials themselves would be futile without the use of this Court's discovery authority to compel disclosure of the information, documents, and things.

**ANSWER:** The Ecometal Defendants are without sufficient information or knowledge to form a belief as to the truth or falsity of the allegations in Paragraph 56 of Terves' First Amended Complaint and therefore deny the same.

57. Around October 2018, Terves had business discussions with Mr. Yuan. During those discussions, which did not lead to a consummated business deal, Terves disclosed to Mr. Yuan the existence of the '010 Patent. Therefore, Defendants have actual knowledge of the '010 patent, and Defendants are willfully infringing the '010 patent.

**ANSWER:** The Ecometal Defendants admit that, in or around October 2018, Mr. Yuan met communicated with representatives of Terves. The Ecometal Defendants deny the remaining allegations in Paragraph 57 of the First Amended Complaint.

58. The Defendants had actual knowledge of the '653 patent by at least August 2018 when the original complaint in this action was served on Ecometal and Mr. Yuan. Despite that actual knowledge, Defendants continue to commit all of the infringing acts identified in this pleading and, thus, are willfully infringing the 'OLD patent.

**ANSWER:** The Ecometal Defendants admit they were served with an original complaint filed in this action in or around August 2019. The Ecometal Defendants deny the remaining allegations in Paragraph 58 of the First Amended Complaint.

59. Defendants' willful infringement of the Terves' Patents has caused financial harm to Terves and irreparable harm, which will continue unless an injunction issues.

**ANSWER:** The Ecometal Defendants deny the allegations in Paragraph 59 of the First Amended Complaint.

### **Count One Infringement of the '010 patent**

60. Terves incorporates by reference all preceding allegations in this complaint as if fully rewritten herein.

**ANSWER:** The Ecometal Defendants incorporate by reference and re-allege each and every Answer to Terves' allegations contained in numerical Paragraphs 1 through 60 as though fully set forth herein.

61. Yueyang is using the methods recited in one or more claims of the '010 patent to manufacture Infringing Materials at its Yueyang, China facility.

**ANSWER:** The Ecometal Defendants are without sufficient information or knowledge to form a belief as to the truth or falsity of the allegations in Paragraph 61 of Terves' First Amended Complaint and therefore deny the same.

62. More specifically, and as a non-limiting example, at its China facility, Yueyang performs each of the steps of claim 1 of the '010 patent by: (a) melting magnesium or magnesium alloy in a furnace (i.e., "heating" it "to a point above its solidus temperature"), (b) adding copper, nickel, cobalt, titanium, or iron as an additive (that constitutes about .05 wt % to 45 wt % of the mixture), where the additive has a higher melting point than the magnesium or alloy, and (c) cooling the magnesium composite, where the composite includes in situ precipitation of galvanically-active intermetallic phases.

**ANSWER:** The Ecometal Defendants are without sufficient information or knowledge to form a belief as to the truth or falsity of the allegations in Paragraph 62 of Terves' First Amended Complaint and therefore deny the same.

63. The Infringing Materials, therefore, are made by Yueyang by a process patented in the United States.

**ANSWER:** The Ecometal Defendants are without sufficient information or knowledge to form a belief as to the truth or falsity of the allegations in Paragraph 63 of Terves' First Amended Complaint and therefore deny the same.

64. Yueyang has directly infringed, and is directly infringing, the '010 patent under 35 U.S.C. § 271(g) at least by importing, selling, offering to sell, and/or using the Infringing Materials in the U.S., either itself or in partnership with Ecometal.

**ANSWER:** The Ecometal Defendants are without sufficient information or knowledge to form a belief as to the truth or falsity of the allegations in Paragraph 64 of Terves' First Amended Complaint and therefore deny the same.

65. Ecometal has directly infringed, and is directly infringing, the '010 patent under 35 U.S.C. § 271(g) at least because: (a) it is importing, selling, offering to sell, and/or using the Infringing Materials in the U.S., and (b) it is controlling, directing, and/or participating with Yueyang to import, sell, offer to sell, and/or use the Infringing Materials in the U.S.

**ANSWER:** The Ecometal Defendants deny the allegations in Paragraph 65 of the First Amended Complaint.

66. Mr. Yuan has directly infringed, and is directly infringing, the '010 patent under 35 U.S.C. § 271(g) at least because: (a) he is personally importing, selling, offering to sell, and/or using the Infringing Materials in the U.S., and (b) he is controlling, directing, and/or participating with Ecometal and Yueyang to import, sell, offer to sell, and/or use the Infringing Materials in the U.S.

**ANSWER:** The Ecometal Defendants deny the allegations in Paragraph 66 of the First Amended Complaint.

67. Mr. Yuan has induced infringement of the '010 patent under 35 U.S.C. § 271(b) at least by actively encouraging Yueyang and Ecometal to commit the direct infringement acts identified above, knowing that the acts he induced would result in direct patent infringement and with specific intent that such infringement occur. Mr. Yuan encouraged Yueyang's infringement at least by directing, controlling, and influencing Yueyang to manufacture, import, and sell the Infringing Materials in the U.S., and Mr. Yuan encouraged Ecometal's infringement at least by directing, controlling, and influencing Ecometal to import and sell the Infringing Materials in the U.S.

**ANSWER:** The Ecometal Defendants deny the allegations in Paragraph 67 of the First Amended Complaint.

68. Furthermore, Mr. Yuan and Ecometal have induced third-parties, such as MMP, to directly infringe the '010 patent under 35 U.S.C. § 271(g) by arranging business deals with or for MMP according to which MMP machines and further processes the Infringing Materials (*i.e.*, "uses" the materials).

**ANSWER:** The Ecometal Defendants deny the allegations in Paragraph 68 of the First



Amended Complaint.

69. Additionally, the methods used by Yueyang to manufacture the Infringing Materials are presumed to have been made by one or more of the processes claimed by the '010 patent under 35 U.S.C. § 295.

**ANSWER:** The Ecometal Defendants deny the allegations in Paragraph 69 of the First Amended Complaint.

70. Defendants have knowledge of the '010 patent, know that the Infringing Products were manufactured by the processes recited in one or more claims of the '010 patent, and thus their infringement is and continues to be willful and deliberate.

**ANSWER:** The Ecometal Defendants deny the allegations in Paragraph 70 of the First Amended Complaint.

71. Terves has been and will continue to be damaged by Defendants' infringement in an amount to be determined at trial.

**ANSWER:** The Ecometal Defendants deny the allegations in Paragraph 71 of the First Amended Complaint.

72. Terves has been suffering irreparable harm due to Defendants' infringement and will continue to suffer irreparable harm unless and until Defendants are enjoined by this Court.

**ANSWER:** The Ecometal Defendants deny the allegations in Paragraph 72 of the First Amended Complaint.

### **Count Two Infringement of the '653 patent**

73. Terves incorporates by reference all preceding allegations in this complaint as if fully rewritten herein.

**ANSWER:** The Ecometal Defendants incorporate by reference and re-allege each and every Answer to Terves' allegations contained in numerical Paragraphs 1 through 73 as though fully set forth herein.

74. The Infringing Materials are covered by one or more claims of the '653 patent. For example, as to claim 1 of the '653 patent, the magnesium materials that Defendants are importing, selling, offering to sell, and using: (a) contain magnesium or a magnesium alloy, (b) have copper,

nickel, cobalt, or iron as an additive (that constitutes about .05 wt % to 45 wt % of the mixture), (c) the additive forms a precipitant in the composite, and (d) the magnesium composite has a dissolution rate of at least 5 mg/cm<sup>2</sup>/hr. in 3 wt % KCl water mixture at 90° C.

**ANSWER:** The Ecometal Defendants deny the allegations in Paragraph 74 of the First Amended Complaint.

75. Yueyang has directly infringed the '653 patent under 35 U.S.C. § 271(a) at least by importing, selling, offering to sell, and/or using the Infringing Materials in the U.S.

**ANSWER:** The Ecometal Defendants are without sufficient information or knowledge to form a belief as to the truth or falsity of the allegations in Paragraph 75 of Terves' First Amended Complaint and therefore deny the same.

76. Ecometal has directly infringed, and is directly infringing, the '653 patent under 35 U.S.C. § 271(a) at least because: (a) it is importing, selling, offering to sell, and/or using the Infringing Materials in the U.S., and (b) it is controlling, directing, and/or participating with Yueyang to import, sell, offer to sell, and/or use the Infringing Materials in the U.S.

**ANSWER:** The Ecometal Defendants deny the allegations in Paragraph 76 of the First Amended Complaint.

77. Mr. Yuan has directly infringed, and is directly infringing, the '653 patent under 35 U.S.C. § 271(a) at least because: (a) he is personally importing, selling, offering to sell, and/or using the Infringing Materials in the U.S., and (b) he is controlling, directing, and/or participating with Ecometal and Yueyang to import, sell, offer to sell, and/or use the Infringing Materials in the U.S.

**ANSWER:** The Ecometal Defendants deny the allegations in Paragraph 77 of the First Amended Complaint.

78. Yueyang has induced infringement of the '653 patent under 35 U.S.C. § 271(b) at least because, with knowledge of the '653 patent, it has sold and imported the Infringing Material in the U.S. for others (including Protek, MMP, Ecometal, and others in the distribution chain) to use and resell the Infringing Material, which are acts of direct infringement, with specific intent that they do so.

**ANSWER:** The Ecometal Defendants are without sufficient information or knowledge to form a belief as to the truth or falsity of the allegations in Paragraph 78 of Terves' First Amended Complaint and therefore deny the same.

79. Ecometal has induced infringement of the '653 patent under 35 U.S.C. § 271(b) at least because, with knowledge of the '653 patent, it has sold and imported the Infringing Material in the U.S. for others (including Protek, MMP, and others in the distribution chain) to use and resell the Infringing Material, which are acts of direct infringement, with specific intent that they do so.

**ANSWER:** The Ecometal Defendants deny the allegations in Paragraph 79 of the First Amended Complaint.

80. Mr. Yuan has induced infringement of the '653 patent under 35 U.S.C. § 271(b) at least by actively encouraging Yueyang and Ecometal to commit the direct infringement acts identified above, knowing that the acts he induced would result in direct patent infringement and with specific intent that such infringement occur. Mr. Yuan encouraged Yueyang's infringement at least by directing, controlling, and influencing Yueyang to manufacture, import, and sell the Infringing Materials in the U.S. and Mr. Yuan encouraged Ecometal's infringement at least by directing, controlling, and influencing Ecometal to import and sell the Infringing Materials in the U.S.

**ANSWER:** The Ecometal Defendants deny the allegations in Paragraph 80 of the First Amended Complaint.

81. Terves has been and will continue to be damaged by Defendants' infringement in an amount to be determined at trial.

**ANSWER:** The Ecometal Defendants deny the allegations in Paragraph 81 of the First Amended Complaint.

82. Terves has been suffering irreparable harm due to Defendants' infringement and will continue to suffer irreparable harm unless and until Defendants are enjoined by this Court.

**ANSWER:** The Ecometal Defendants deny the allegations in Paragraph 82 of the First Amended Complaint.

### **Prayer for Relief**

In response to Terves' prayer for relief, the Ecometal Defendants deny each and every allegation contained therein and, further, the Ecometal Defendants specifically deny that Terves is entitled to any of the relief requested in the First Amended Complaint; specifically deny that Terves is entitled to a finding that Defendants have directly infringed one or more claims of the

'010 Patent; specifically deny that Terves is entitled to a finding that the Ecometal Defendants have each induced infringement of the '010 Patent; specifically deny that Terves is entitled to a finding that Defendants have directly infringed one or more claims of the '653 Patent; specifically deny that Terves is entitled to a finding that Defendants have each induced infringement of the '653 Patent; specifically deny that Terves is entitled to injunctive relief or damages of any kind; specifically deny that Terves is entitled to an order requiring any of Defendants to account to Terves for any sales, revenues, or profits; specifically deny that this case is “exceptional” or that Terves is entitled to attorney’s fees; and specifically deny that Terves is entitled to interest and costs.

#### **THE ECOMETAL DEFENDANTS’ AFFIRMATIVE DEFENSES**

The Ecometal Defendants allege the following as separate and affirmative defenses to the First Amended Complaint. By virtue of having listed the following defenses, the Ecometal Defendants do not assume any legal or factual burden not otherwise assigned to it under the law:

1. The Ecometal Defendants have not engaged in any acts that would constitute direct, indirect, or joint infringement of any valid claim of the '010 Patent or the '653 Patent, either literally or under the doctrine of equivalents, willfully or otherwise.
2. The Ecometal Defendants do not make, use, sell, or offer to sell each claimed element of any asserted claim of the '010 Patent or the '653 Patent.
3. The Ecometal Defendants do not direct or control another entity to make, use, sell, or offer to sell any element of any asserted claim of the '010 Patent or the '653 Patent, which is not made, used, sold, or offered to be sold by the Ecometal Defendants.
4. The Ecometal Defendants had no knowledge that any product they used or uses allegedly infringes any specific claim of the '010 Patent or the '653 Patent, and therefore, they

could not have induced any alleged infringement of any specific claim of the '010 Patent or the '653 Patent.

5. The claims of the '010 Patent and the '653 Patent are invalid and/or unenforceable for failure to satisfy the conditions of patentability set forth in 35 U.S.C. §§ 101 *et seq.*, including at least sections 101, 102, 103, and 112.

6. Terves' claims are barred, in whole or in part, by the doctrines of waiver, laches, and/or estoppel.

7. The First Amended Complaint fails to state a claim upon which relief may be granted.

8. Terves is barred, under the doctrine of prosecution history estoppel, from construing the claims the '010 Patent or the '653 Patent in such a way as may cover any of the products or processes used by the Ecometal Defendants by reasons of statements made to the United States Patent and Trademark Office during the prosecution of the application that led to the issuance of the '010 Patent and the '653 Patent.

The Ecometal Defendants reserve the right to assert additional defenses that it learns of through discovery in this action.

#### **THE ECOMETAL DEFENDANTS' PRAYER FOR RELIEF**

The Ecometal Defendants seek the following relief:

- a. A judgment that neither of the Ecometal Defendants has infringed any claim of the '010 Patent or the '653 Patent;
- b. A judgment that the '010 Patent and the '653 Patent are invalid and/or unenforceable against the Ecometal Defendants;

- c. A judgment declaring this case exceptional under 35 U.S.C. § 285 and awarding the Ecometal Defendants their attorneys' fees and prejudgment interest, and an award to the Ecometal Defendants of all their costs of this action; and
- d. Such other relief as the Court deem just and proper.

**THE ECOMETAL DEFENDANTS' DEMAND FOR A JURY TRIAL**

The Ecometal Defendants demand a trial by jury on all issues so triable.

Dated: November 8, 2019.

Respectfully submitted,

/s/ Steven J. Forbes

Steven J. Forbes (Ohio Bar No.0042410)

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**ATTORNEYS FOR DEFENDANTS  
NICK YUAN AND ECOMETAL INC.**

**CERTIFICATE OF SERVICE**

I certify that on November 8, 2019, I electronically transmitted the foregoing document to the Clerk of the Court using the ECF system for filing and transmittal of a Notice of Electronic Filing to the following ECF registrants:

Matthew J. Cavanaugh  
David B. Cupar

/s/ Evan W. Talley  
Evan W. Talley